

IN THE CLAIMS:

Claim 1 (currently amended) A process for the preparation of high surface area activated carbon from coconut shells shell, which comprises cleaning the coconut shells, drying the cleaned coconut shells at a temperature within a first range, crushing the dried coconut shells, sieving the crushed coconut shells shell through 100-400 mesh to obtain uniform sized coconut shell powder, treating the shell powder with an activating agent, drying the treated coconut shell powder, carbonizing the powder in an inert atmosphere at a temperature within a second range of 300-400°C, activating the carbonized powder in an inert or oxidizing gas at a temperature within a third range of 500-800°C, cooling the activated carbon to the room temperature, removing the excess of activating agent ~~by treating~~, washing with water to bring the powder to neutral pH and drying the washed powder activated carbon to obtain the activated carbon.

Claim 2 (currently amended) A process as claimed in claim 1 wherein the activating agent is selected from ~~he~~ the group consisting of 250 mM –2M aqueous solutions of an alkali metal hydroxide, an alkali metal hydrides hydride, carbonates a carbonate, a chloride chlorides, a sulfide sulfides, a thiocyanate of a transition metal metals and an inorganic acid acids.

Claim 3 (currently amended) A process as claimed in claim 2, wherein the chloride is zinc chloride.

Claim 4 (currently amended) A process as claimed in claim 2, wherein the alkali metal ~~hydride~~ hydroxide is potassium hydroxide.

Claim 5 (currently amended) A process as claimed in claim 1, wherein the inert gas is selected from the group consisting of nitrogen and argon.

Claim 6 (currently amended) A process as claimed in claim 1, wherein the carbonization is carried out at a ~~the temperature in the second range of 300-400 °C~~ for 3-6 h, in an the inert atmosphere and using different heating rates ranging from 5-20 °C /min.

Claim 7 (currently amended) A process as claimed in claim 1, wherein the activation is carried out in a dynamic flow of the inert or oxidizing gas at a flow (flow rate of 20-200 ml/min) at the temperature in the third range of 500-800 °C for 6-24 h at a heating rate of 5-20 °C/min.

Claim 8 (currently amended) A process as claimed in claim 1, wherein the coconut ~~shell is~~ shells are first cleaned mechanically to remove fibrous ~~part~~ parts therefrom followed by a thorough rinsing with distilled water.

Claim 9 (currently amended) A process as claimed in claim 1, wherein the first range is 110-115°C and the cleaned coconut shell is dried at a temperature in the first range of 110-150°C for 12-20 h.

Claim 10 (currently amended) A process as claimed in claim 1, wherein the crushed coconut shell powder is sieved through 100-400 mesh to obtain uniform sized particles.

Claim 11 (currently amended) A process as claimed in claim 1, wherein the first range is 100-200°C and the treated coconut shell powder is dried at a temperature in the first range of ~~100-200~~⁰C for a period of 12-22 h.

Claim 12 (currently amended) A process as claimed in claim 1, wherein the excess activating agent is removed by treating with the dilute hydrochloric acid followed by the washing with water.

Claim 13 (currently amended) A process as claimed in claim 1, wherein the activated carbon powder obtained has a nitrogen adsorption isotherm at 77 K, a BET surface area of in the range 1500-2000 m²/g with average pore diameter 17-21 Å, layer and a capacitance in the range of 10-180 F/g.